

Claims

1 1. A conductive polymer matrix comprising a molecule having binding specificity for
2 a target molecule.

1 2. The conductive polymer matrix according to claim 1, wherein said molecule having
2 binding specificity for a target molecule is an antibody, or an antigen binding fragment
3 thereof.

1 3. The conductive polymer matrix according to claim 2, wherein said antibody is a
2 monoclonal antibody.

1 4. The conductive polymer matrix according to claim 2, wherein said antibody binds
2 to a CD34 determinant.

1 5. The conductive polymer matrix according to claim 1, wherein said molecule having
2 binding specificity for a target molecule is selected from the group consisting of Fc receptor,
3 Protein G, and avidin or avidin-related molecules.

1 6. A method for isolating a target molecule from a sample, said method comprising
2 contacting said sample with a conductive polymer matrix, wherein said conductive polymer
3 matrix comprises a molecule having binding specificity for a target molecule; binding of said
4 target molecule to said molecule having binding specificity for said target molecule; and
5 releasing said molecule having binding specificity for said target molecule from said
6 conductive polymer matrix.

1 7. A method for isolating a target cell from a sample comprising a mixture of cells,
2 said method comprising contacting said mixture of cells with a conductive polymer matrix,

3 wherein said conductive polymer matrix comprises a molecule having binding specificity for
4 a target molecule expressed on said target cell; binding of said target cell to said molecule
5 having binding specificity for said target cell; and releasing said molecule having binding
6 specificity for said target molecule from said conductive polymer matrix.

1 8. The method according to claim 7, wherein said method further comprises washing
2 said polymer matrix to remove unbound material.

1 9. The method according to claim 7, wherein said conductive polymer matrix
2 comprises an antibody.

1 10. The method according to claim 9, wherein said antibody is a monoclonal
2 antibody.

1 11. The method according to claim 9, wherein said antibody binds to a CD34
2 determinant.

1 12. The method according to claim 7, wherein said target cell is a stem cell.

1 13. The method according to claim 7, wherein said conductive polymer matrix is
2 formed using enzyme generated means.